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"เกษตรศาสตร์วิถีถัดไป พลิกวิกฤติสู่ความยั่งยืน"  
"Next Normal KASETSART: Turning Crisis into Sustainability"  
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ณ มหาวิทยาลัยเกษตรศาสตร์ บางเขน

นวัตกรรมอุตสาหกรรมเกษตรวิถีถัดไป: แผนที่นำทางเศรษฐกิจไทยสู่ความยั่งยืน  
(Next Normal Agro-Industry Innovation:  
Roadmap for Thai Economy toward Sustainability)"

ประชุมออนไลน์ผ่านระบบ Cisco Webex

## Impact of environmental law and regulations for food packaging industries

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# Why packaging materials are important in circular economy?



# A European Green Deal

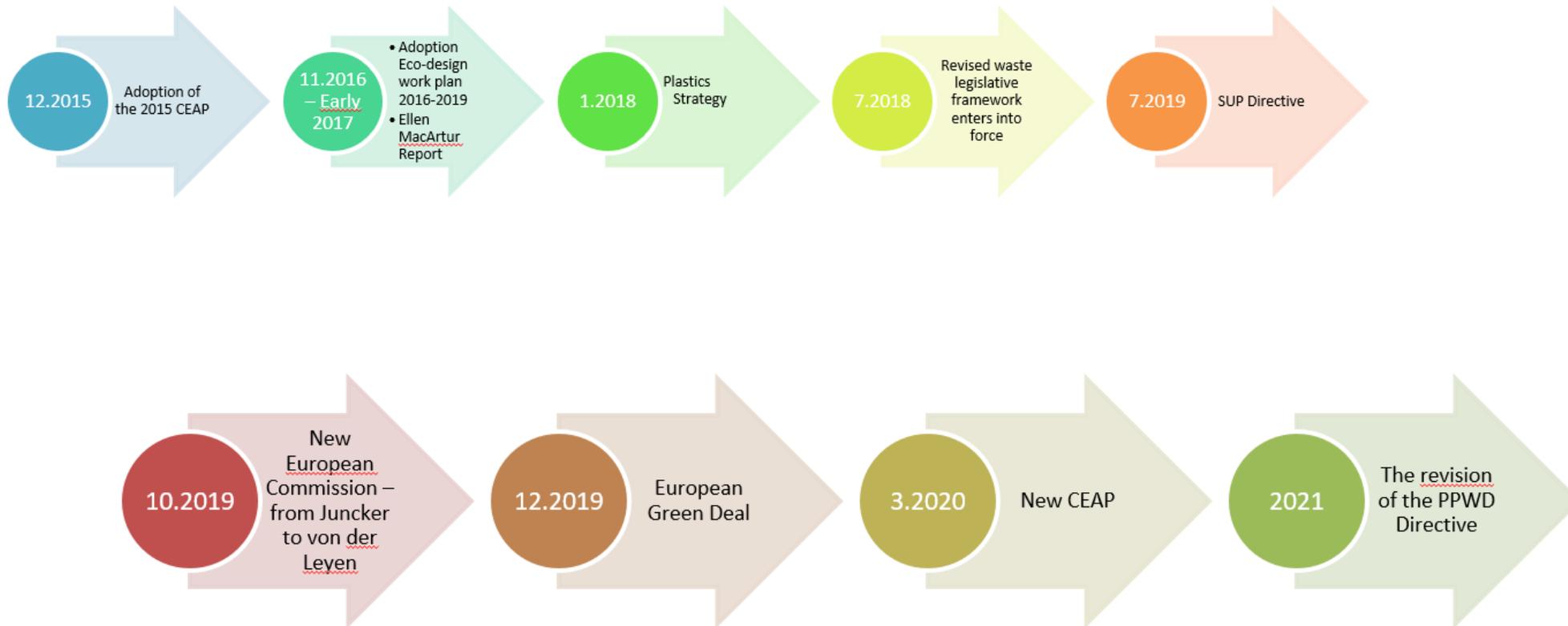
Striving to be the first climate-neutral continent

- The EU aims to be climate neutral by 2050. To do this, it started a series of initiatives that will protect the environment and boost the green economy.
- Objectives:
  - No net emissions of greenhouse gases by 2050
  - Economic growth decoupled from resource use
  - Maintain Social inclusion
- 2019-2024: initiatives involving industry strategy, energy production, sustainable mobility, climate change, and also heavily involving the EU's political role and leadership
- The **Circular Economy Package** being the most relevant for the FCM manufacturing industry



*Europe must lead on the climate crisis. The European Green Deal shows how  
Ursula von der Leyen*

# Evolution of packaging environmental legislation in the European Union





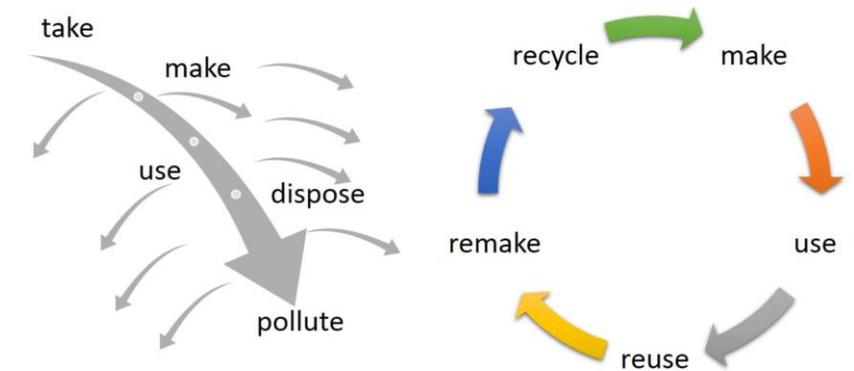
## Legislative

Horizontal:

- WASTE FRAMEWORK DIRECTIVE
- PACKAGING AND PACKAGING WASTE
- LANDFILL DIRECTIVE

Vertical:

- WASTE ELECTRIC & ELECTRONIC EQUIPMENT
- END-OF LIFE VEHICLES
- BATTERIES



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## Non-legislative

**Plastics Strategy**

**Non-toxic environment**

Waste-to-energy

**Farm-to-Fork Strategy**

Critical raw materials

Construction demolition

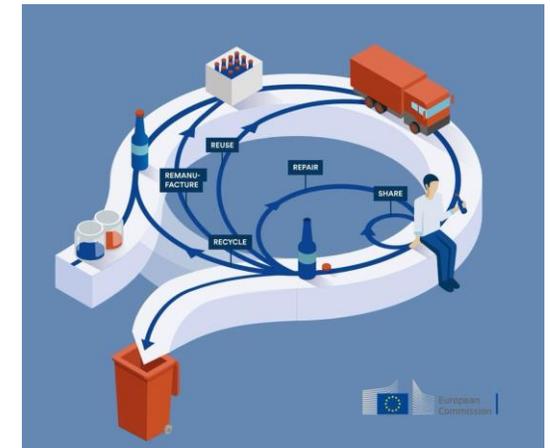
Biomass bio-based products

Innovation/Investments

Other horizontal measures

# Critical actions of the Circular Economy Package 2015

- Revised **legislative proposal on waste**
- Development of **quality standards for secondary raw materials** (in particular for plastics)
- Analysis and **policy options to address the interface between chemicals, products and waste legislation (Chemical Strategy for Sustainability)**
- **Strategy on plastics** in the circular economy
- Report on **critical raw materials** and the circular economy





# *The EU Strategy on Plastics-1*

- Recycling, 2030's goals
  - all plastic packaging placed in EU is reusable or can be recycled in a cost-effective manner.
  - half of plastics waste is recycled, and sorting and recycling capacity increases x4 since 2015
  - Demand for recycled plastic grows x4: Ecolabel and Green Public Procurement
- Design for Recycling
  - Measures to improve design: revision of Essential Requirements - amendment of the Packaging & Packaging Waste Directive
- Standards
  - Development of quality standards for sorted plastics waste and recycled plastics
  - CEN: Identification of Potential Needs of Standardisation for sustainable chemicals from primary and secondary raw materials
  - Mapping of over 1100 existing standards and standardisation initiatives, codes of practice, schemes, and guides.



# *The EU Strategy on Plastics-2*

- Reducing Plastics
  - Single Use Plastic Directive- SUP; most of restricted products are FCM's
- Microplastics
  - Reduction of microplastics (also via REACH for detergents & cosmetics), including pellets spills via voluntary certification scheme
- Biodegradables
  - Opportunities and risk: clear labelling and adequate waste collection and treatment to avoid leakage and create problems for mechanical recycling.
  - LCA to identify conditions under which the use is beneficial.
  - Restrict oxo-plastics in the EU
- EPR schemes and other economic instruments:
  - UK's tax on the production and import of plastic packaging with less than 30% recycled content, from 2022
  - Plastic tax in Italy, Spain

# Single Use Plastics Directive

- MS have to achieve **measurable quantitative reduction in the consumption** of the following products:
  - Food containers made of plastic, used to contain food that is intended for immediate consumption
  - Plastic cups for beverages, including their covers and lids.
- Restrictions of various products and polymers (plates, straws, cutlery, EPS food containers and beverage cup or containers, oxodegradable items)
- Introduction of a **bidging target of recycled content for bottles**: 25% of rPET by 2025, 30% for all polymers by 2030 average at Member States Level
- Product requirement for bottles: caps & lids attached to the main body of the bottle
- **Separate collection targets for beverage bottles** : 77% by 2025 and 90% by 2029 of bottles placed on the market (yearly basis)
- **Measures on EPR** (reinforcement of the “polluter pays” principle)
- **Marking requirements**



# Packaging & Packaging Waste Directive

## “Essential Requirements”

- **Limit the weight and volume** of packaging to a minimum adequate amount (respecting health and safety);
- **Minimise the content of hazardous substances** and materials in the packaging material and its components;
- Design **reusable or recoverable** packaging

## Recovery and recycling objectives

Packaging material	Proposed Target (2025)	Proposed Target (2030)
Paper & card	82%	85%
Glass	70%	75%
Aluminium	55%	60%
Steel	75%	80%
Plastic	50%	55%
Wood	30% <sup>86</sup>	30%
<b>Total Packaging Recycling</b>	<b>66%</b>	<b>70%</b>

# *Extended Producer Responsibility (EPR)*

- **UK, Plastic Packaging Tax (Tax will take effect from April 2022)**
  - £200 per tonne tax on plastic packaging produced in or imported into the UK that does not contain at least 30% recycled plastic.
- **Italy (The application of a national plastic tax is scheduled by July 2022)**
  - Packaging tax on plastic (rate €0.45/kg) and incentives for manufacturing companies producing biodegradable plastic. The tax obligation arises either at the time of the production, or of the final importation in the national territory of the product and becomes payable at the moment of the release for consumption. Recycled plastic products and those made of multiple materials that have a plastic component of less than 40% are excluded.
- **Spain (Entry into foreseen by January/February 2022)**
  - Tax rate of 0,45 €/Kg. The amount to pay will be reduced by the amount corresponding to Kgs of recycled content (subject to certain requirements). The law specified that the recycled content admitted for the purpose of the calculation is only the one coming from the Spanish market.

# Fiscal measures effects

- On 2 May 2018, the EC adopted the EU budget for the Future.
- It introduces a basket of new own resources including a contribution by the Member States calculated on the basis of the amount of plastic packaging waste which is not recycled as reported under the waste directive. This will create an incentive for Member States to reduce packaging waste and stimulate Europe's transition towards a circular economy by implementing the European plastics strategy
- **It is not a tax-based own resource, but rather a national contribution determined according to an environmental rationale;**
- According to the EC forecast, this contribution will bring €7 billion using a call rate of €0.80 – 1.00 /kg



# Lesson learned



Circular economy may gain strong input from a sound approach to packaging management



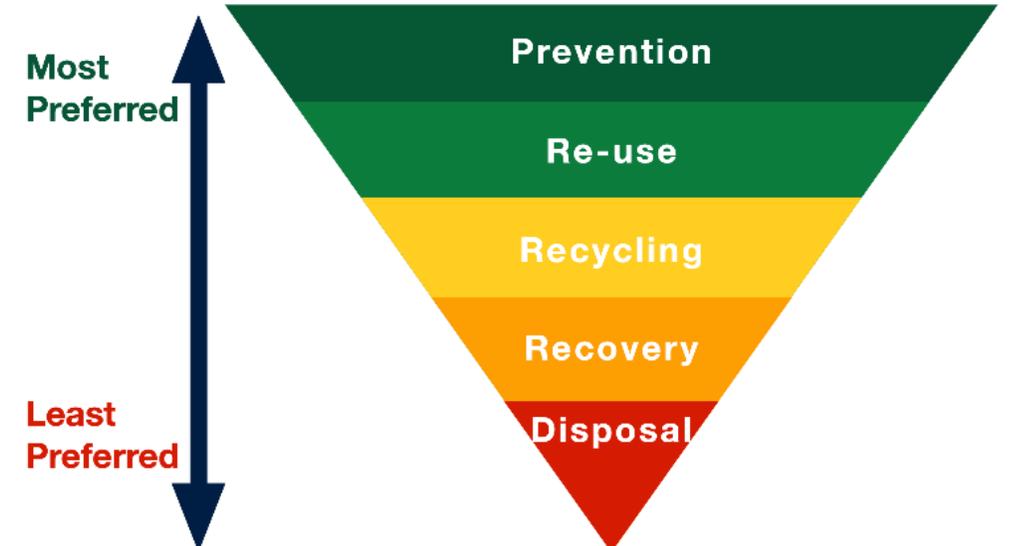
Ambitious recovery and recycling schemes work better if they are gradual, realistic and supported by adequate EPR schemes enabling transition, especially collection for recycling



When it comes to food packaging, attention should be paid to not separate the environmental aspect from safety (e.g. plastic recycling regulations)



You don't need to copy/paste other regulations, but learn from pro/cons experienced in other jurisdictions



# Building consulting and testing capacity in ASEAN

- Provide consulting, testing and expert services on sustainable, recyclable and biodegradable packaging materials
  - Grant access to markets globally
  - Support R&D, sales & marketing, legal & regulatory
  - Compliance assessment, risk assessment
  - Recycled plastics in food and near-food applications (e.g. cosmetic packaging, body care, toys, etc.)
  - Innovative sustainable and biodegradable materials
- Problem solving, enhanced education, training and R&D support on innovative packaging, food contact materials and global regulations



Department of Packaging  
and Materials Technology

